REMARKS

This paper is being filed in response to the office action dated March 10, 2009 in which (a) claims 1-38 were pending; (b) claims 17 and 18 were rejected under 35 U.S.C. § 101; (c) 17, 18, 32 and 33 were rejected under 35 U.S.C. § 103 based on Bell et al. in purported combination with Raab et al.; (d) claims 1-4, 6, 8-12, 14-16, 19-22, 28-31 and 34-38 were rejected under 35 U.S.C. § 103 based on a purported combination of Matsumoto et al., Bell et al. and Raab et al.; (e) claims 5, 7 and 13 were rejected under 35 U.S.C. § 103 based on a purported combination of Matsumoto et al., Bell et al., Raab et al. and Michiwaki; (f) claims 23-26 were rejected under 35 U.S.C. § 103 based on a purported combination of Matsumoto et al., Bell et al., Raab et al. and Kreidler et al.; (g) claim 27 was rejected under 35 U.S.C. § 103 based on a purported combination of Matsumoto et al., Bell et al., Raab et al. and Rabin et al.

Applicants have carefully considered the rejections and respectfully traverse, in light of the foregoing amendments and the following remarks. Removal of the rejections and confirmation of allowance of this application are respectfully requested.

All of the rejections are based on a similar nucleus of references (Bell et al., Raab et al., and Matsumoto et al.). The remarks combined with the above amendments demonstrate the uniqueness of the claimed subject matter over any of the cited references, whether taken along or in combination. Most notably, as outlined below, none of the art of record provides a system in which an intermediary computer or other local computer is able to take a macro designed for another, entirely different machine (such as a manufacturer's CMM machine), and use that macro to perform an evaluation at that intermediary machine of a part that is never provided to that intermediary machine, but instead is only represented by numerical data that has been sent to that intermediary computer.

I. Claim Rejections Under 35 U.S.C. § 101

Applicant has amended claims 17 and 18 above. The rejection of these claims under 35 U.S.C. § 101 is traversed.

II. Claim Rejections Under 35 U.S.C. § 103

Applicant addresses the claims in order.

Generally speaking, the present application provides for novel techniques for evaluating an object. Typically evaluation provides measuring a macro to move a

measurement device (e.g., a CMM arm) over an object in order to determine the geometry of certain features such as the circularity of a hole, the perpendicular angles in a cubic cavity, etc. The macro does not merely measure the object, but provides an assessment thereof. Conventionally, the macro was required to be in the same assembly used for manufacturing. The present application, however, provides an improved, different way of performing evaluation, namely allowing evaluation to be temporally and spatially separated from both the equipment actually used to measure the physical object and the object itself. As a result, three-dimensional data may be captured by a remote measuring device and this data is written to a data file which is transmitted to an entirely different machine that does not control the remote measuring device. By transmitting the numerical representation of one (remote) device to an entirely different, (local) device, that local device can be particularly configured to perform evaluation ostensibly of the original object, by performing an evaluation on only the three-dimensional data measured from that object.

With that background in mind, turning to the actual language of the claims, claim 1 has been amended to recite a method of remotely evaluating a physical object, the method comprising:

> reading instructions of a macro at a local computer,
>
> wherein said macro is configured for use with a first measurement equipment, said first measurement equipment being capable of performing measurements of said physical object, and
>
> wherein said macro comprises instructions for said first measurement equipment to perform an evaluation of said physical object;
>
> receiving at the local computer a numerical representation of said physical object, wherein said numerical representation has been previously generated by measurement of said physical object using a second measurement equipment and prior to the numerical representation being sent to the local computer, and wherein the local computer is configured such that it is capable of evaluating said physical object by evaluating said numerical representation in lieu of evaluating said physical object;
>
> generating an evaluation of said physical object at said local computer by performing the instructions of said macro upon the numerical representation of the surface of said physical object; and

outputting through the local computer said evaluation.

The office action rejects claim 1 based on a purported combination of Matsumoto et al., Bell et al. and Raab et al. By way of summary, the office action first points to Matsumoto et al. as teaching the reading of macro instructions. Next, the office action points to Bell et al. as teaching that macro instructions can be used to perform an evaluation. Finally, the office action points to Raab et al. as teaching a coordinate measurement machine that offers cloud point functionality. None of these characterizations, however, can be said to teach or motivate the actual recited claim language. Indeed, none of the references, taken alone or in combination, can be said to provide such claim language.

The amended claim language should clarify the remote nature of the different stages, and make it more clear that remote evaluation is **nowhere** to be found in the cited art. Matsumoto et al. for example describes a machine tool apparatus for measuring and milling a work-piece, which work-piece **must be secured in the apparatus** at the time of measurement and milling. That is, Matsumoto et al. requires the presence of the physical object at the time of measurement, which is obviously contrary to systems that are designed to allow for analysis from locations remote to the object. In fact, there is no motivation nor recognition of the advantage of an ability to evaluate a part at some completely different, remote location. Yet, with the present application, the evaluation can be performed at any location, if properly configured, and at any time, irrespective of where the part is or when the part was manufactured and measured.

In light of the foregoing, and the above amendments, Matsumoto et al. cannot be said to teach, motivate, or otherwise provide a method that comprises "reading instructions of a macro at a local computer" where that macro "is configured for use with first measurement equipment" or where the macro "comprises instructions for said first measurement equipment to perform an evaluation of said physical object," as recited in claim 1.

Moreover, Matsumoto et al. cannot be described as providing a method the includes that same local computer receiving a numerical representation that "has been previously generated by measurement of said physical object using a second measurement equipment and prior to the numerical representation being sent to the local computer," as recited in claim 1. This notion, of measurement equipment (remote to the local computer) and capable of providing an analysis macro, in one instance, and a numerical

representation, in another instance, all to a remote local computer for analysis, is nowhere provided for or suggested in the prior art.

Further to this point, claims 39 and 40 (and claims 41-44) have been added to establish that in some instances the first measurement equipment, providing the macro, is the same measurement equipment as the second measurement equipment, providing the numerical representation (e.g., claim 40). While in other examples (e.g., claim 39) these two measurement equipment devices may be different from one another, and both remote to the local computer. Matsumoto et al. does not and would not provide for such systems, nor would any of the other art of record.

As none of Bell et al. nor Raab et al. provide or motivate such subject matter, the rejection of claim 1, as amended, is traversed.

While the foregoing alone establishes that the rejections should be removed, applicant also responds that no purported combination of these references could be argued as motivating the recited subject matter.

To establish a *prima facie* case of obviousness, the examiner must show that **all** the elements of the claim are taught or suggested in the prior art (MPEP 2143.03 and Federal Register Examination Guidelines for Determining Obviousness, Section III.A.1, Fed Reg., Vol. 72, No. 195, 2007), and if prior art elements are described in the art, the combination of elements must yield predictable results to render a clamed invention obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.* affirmed that a sufficient showing of obviousness must be made, and that "the key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." Federal Register, Vol. 72, No. 195, Wednesday, October 10, 2007, Notices, page 57528 (courtesy copy attached). The Supreme Court, quoting *In re Kahn*, admonished that "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at I, 82 USPQ2d at 1396.

The applicant respectfully asserts that the purported 'motivations' provided by the examiner are not derived from any of the seven (A-G) example rationales for establishing a motivation to combine as set forth Federal Register, Vol. 72, No. 195, pages 57526-57535, and later promulgated into MPEP 2143. For example, at the bottom of page 10, the office action states that it would have been obvious to combine Matsumoto et al., Bell et al. and

Raab et al. because the controller or serial box of Raab is positioned under the host computer somewhat remotely from the probe and of the arm. This 'rationale' is not discussed in the prior art; it is not described as being an extension of some other known methodology; it is not designed to improve any system of the three patent disclosures; it is not directed to any identified problem in the prior art. The office action rationale appears to be nothing more than impermissible hindsight reconstruction, using the applicant's case as the roadmap for trying to suggest why the claimed subject matter is not provided for in the prior art.

The deficiency is illuminated further in this case because, at least with respect to Bell et al. and Matsumoto et al. there is strong support that the teachings of one reference teach away from the need for the teachings of the other. In Matsumoto et al. the physical object is measured **prior** to milling so that the object can be more accurately cut (see Matsumoto et al. 6:62 – 7:2). The object is a blank work piece, generally devoid of features such as holes, grooves, protrusions. As such, it would appear that one of ordinary skill would have found it wasteful and undesirable to apply a sophisticated technique such as evaluation (Bell et al.) to a **blank** work piece. This would not yield useful results and would slow process operation. Absent some motivation (which the office action has not provided) to apply evaluation to Matsumoto et al. **prior** to milling, one of the ordinary skill in the art would not have been incentivized to combine these two teachings.

Therefore, not only does the cited art fail to teach or motivate all of the claimed subject matter, one of ordinary skill in the art would not have been motivated to make the combinations now suggested.

The rejections of claim 1 and the claims depending therefrom are traversed.

For at least the reasons outlined above with respect to claim 1, the rejections of amended claims 17, 18, 37 and 38 are also traversed. These claims (and their dependents) are in condition for immediate allowance, as are their respective dependent claims.

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Respectfully submitted,

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